



## OPTICAL FIBER MANUFACTURING

### PROJECT

There is provided a project on **building a modern plant on production of optical fiber and fiber-optic cables**.

Prerequisites of the project implementation are the following:

- Demand for optical fiber, generating by cable plants in Russia and Belarus, is almost fully covered by import.
- In 2012 Russia imported fiber-optic cables to the value of **USD 72 mn**, annual average growth rate over the last 4 years was **66%**.
- Russian fiber optics market is estimated at more than **USD 900 mn**.
- In the implementation stage there are "fiber optics to the house" projects – increase of worldwide average internet connection speed from **9 to 34 Mbit/c** by 2016.
- Capital expenditures for the project may total **USD 25-30 mn**, IRR – **15-18%**.

### MARKETS

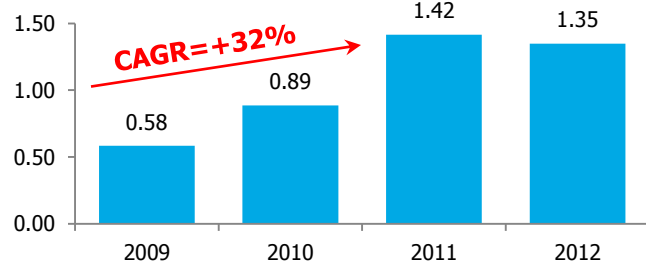
#### Customs Union market:

- Optical fiber import in Russia was doubling annually during 2009-2012.
- Cable imports in Russia in 2012 totaled **USD 1,35 bn**, growing by **32%** per year on average.
- Fiber-optic cables account for slightly more than **5%** of total cable imports, but grows twofold faster – **66%** a year.
- All cable (inc. fiber optics) manufacturing plants import optical fiber, mostly from the USA and Japan.

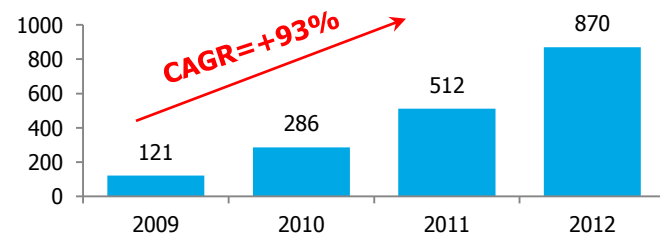
#### Internal market of Belarus:

- In 2012 Belarus exported fiber-optic cables to Russia to the value of **USD 34,2 mn**, which accounts for **47%** of total Russia's fiber optics import in money terms.

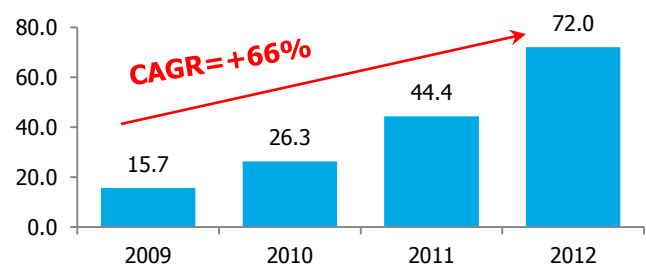
Cable imports in Russia, USD bn



Optical fiber imports in Russia, t



Imports of fiber-optic cables in Russia, USD mn



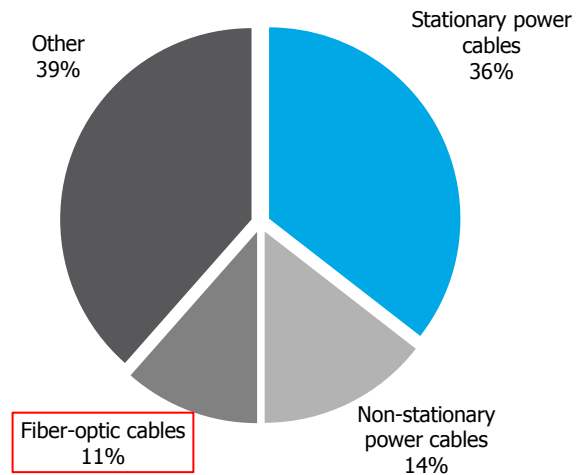
## MARKET OPPORTUNITIES

### Global opportunities:

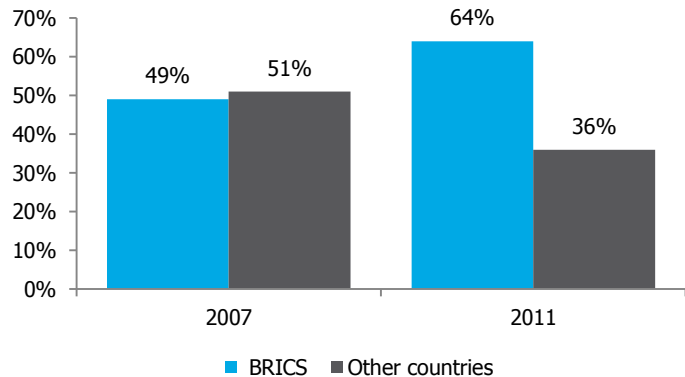
- During 2007-2011 there has been a trend of fiber optics consumption growth in BRICS countries (**from 49% to 64%**), which indicates the willingness to reach the data transmission speed of the level of advanced economies.
- Telecommunications market is projected to grow in the near 5 years owing to two key segments: data transmission services and development of fixed and mobile broadband communication.
- With usage of fiber-optic cables the internet access speed by means of broadband channels is projected to grow **from 9 to 34 Mbit/c**, since such a way of data transmission is the most secure and effective.

### Local opportunities:

- FTTx-projects development («fiber optics to the house»): FTTP – fiber optics to the user, FTTB – fiber optics to the building, FTTC – fiber optics to the house and office – increase of data transmission speed.
- The following telecommunication projects are going to be implemented: Vladivostok – Jacksonville (submarine cable of 35000 km length), Europe-Asia via Murmansk (of 17000 km length), etc.



### Optical cables consumption share



## INVESTMENT OPPORTUNITIES

Launching optical fiber manufacturing:

- Capex may total USD 25-30 mn.
- Payback period is 4-5 years.
- IRR varies between **15-18%**.

Launching manufacturing of fiber-optic cables:

- Capex may total **USD 10-15 mn**.
- Payback period is about **3-4 years**.
- IRR varies between **20-23%**.

## POTENTIAL INVESTORS

- Strategic investors** – companies with appropriate technologies and experience in fiber optics manufacturing, aimed at local content.
- Backward integration:**
  - companies, for which fiber optics is the main raw material (optical, quartz, cable, etc.).
  - companies, for which fiber-optic cables is the main raw material (telecommunication, energy, etc.).

### Amount of optical cables laid within the framework of the project "fiber to the house", mn fiber-kilometres

